Fibre Diffraction Review 13, 9 - 10, 2005 doi: 10.1382/fdr.2005.1308

First FiberNet Workshop: Argonne, 2004

FiberNet, the new American fiber diffraction organization, held its first workshop from Thursday 21 October to Saturday 23 October 2004 at Argonne National Laboratory (ANL), about 25 miles south-west of Chicago. ANL was a particularly appropriate site for the workshop, since it is the location of the facilities of the Biophysics Collaborative Access Team (*BioCAT*) at the Advanced Photon Source synchrotron. *BioCAT* is a unique resource for biological fiber diffraction in America, and functions as a focal point for the activities of *FiberNet*.

FiberNet is a network of American fiber diffraction groups, established in 2003 with the support of the National Science Foundation. The goal of the network is to develop and disseminate fiber diffraction methods through a program of software development and a series of retreats and workshops. *FiberNet* is particularly interested in biological fiber diffraction, but fiber diffraction methods for biological and non-biological applications are generally similar, so the organization encompasses all approaches and applications. The establishment of *FiberNet* was inspired by the example of CCP13, and the two organizations work closely together.

The workshop was attended by 28 participants, including four from Europe and one from Canada. *CCP13* was represented by John Squire and Trevor Forsyth. The program included a number of excellent research presentations, mostly focused on biological fiber diffraction, and included X-ray and neutron scattering, taking both experimental and theoretical approaches.

The relatively small size of the meeting lent itself particularly to a number of open forums, which were among the high points of the workshop. John Squire led a highly informative discussion of the software available from *CCP13*; the effectiveness of this discussion might be measured by the number of laptops to be seen busily running the *CCP13* programs during the breaks after that session! Gerald Stubbs and Wen Bian led a discussion of proposed *FiberNet* software, with particular interest shown in the molecular dynamics refinement program F-XPLOR. A panel consisting of R. Chandrasekaran from

Purdue, Amy Kendall from Vanderbilt, and Kenn Gardner from Dupont led us through a variety of specimen preparation methods, catalyzing exchanges of ideas that are still continuing.

Friday's program ended with a tour of the *BioCAT* beam line at the Advanced Photon Source, the Argonne third generation synchrotron. The tour included the orientation that is required for new users, in preparation for another very successful feature of the workshop, an opportunity on Saturday for participants to collect data from their own specimens. This was attended by 11 participants, who all took home data from their samples. Fiber diffraction workshops where groups of people share time to collect wide angle fiber data over a two to three day period are anticipated to become a regular feature of the BioCAT scientific program.

Although the scientific activity was intense, there were lighter moments. A poster session on Thursday provided opportunities for lively exchanges of ideas, and with most participants staying at the Argonne Guest House, dinners on Thursday and Friday were well attended. It has been some years since American fiber diffractionists had such an opportunity to get to know each other, so this meeting was a time to develop new collaborations and collegial relationships, as well as a showcase for the facilities of *BioCAT*.

The workshop is planned to be the first of a series. The network supports annual workshops; in odd-numbered years, these take the form of a sponsored session on fibre diffraction at the American Crystallographic Association annual meeting (neutron fiber diffraction at Disney World in 2005!). In even-numbered years, however, the workshop will be a free-standing meeting such as this one, rather like the annual CCP13 meeting. The meeting planned for 2006 will be a continuation of the informal fiber diffraction meetings held in American State Parks: in 1989 at Fall Creek Falls, Tennessee, in 1993 at McCormick's Creek, Indiana, and in 1997 at Jenny Wiley State Park, Kentucky. Watch for announcements!

FiberNet is supported by the National Science Foundation's Division of Molecular and Cellular Bioscience, through grant MCB-0234001. *Fibernet's* web site is at www.fiberdiffraction.org.

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November 2004